THE MARINE RECORD.

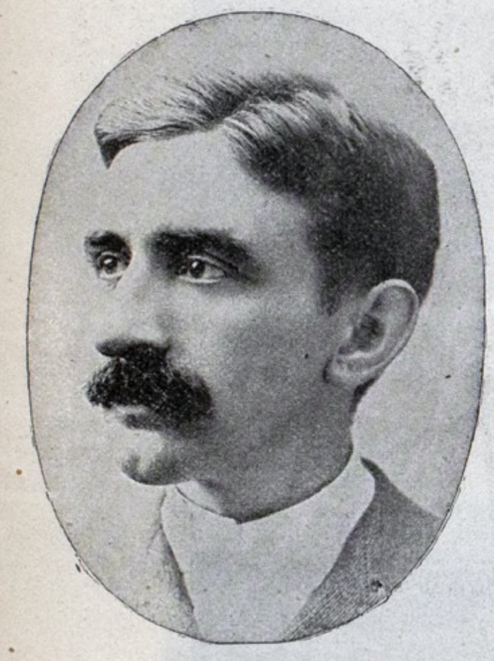
DEVOTED TO COMMERCE, ENGINEERING AND SCIENCE.

$2.00 PER YEAR. ESTABLISHED 1878. 10c. SINGLE COPY.

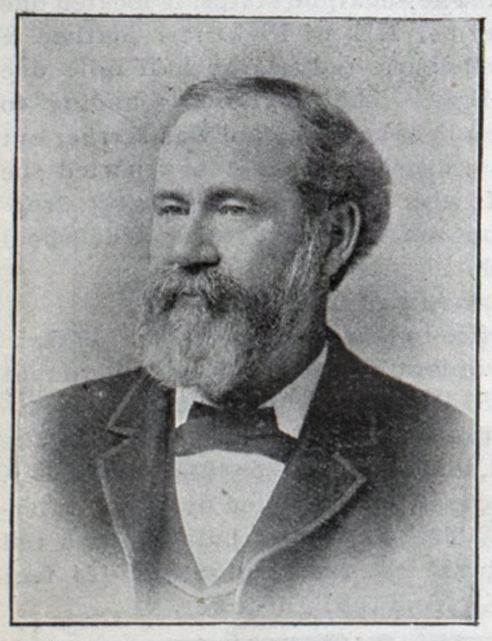
VOL. XVIII. CLEVELAND, OHIO, OCTOBER 10, 1895. NO. 41

THE PORT OF LORAIN.

Lorain has been peopled, from the earliest times, chiefly by lake-faring people and shipbuilders. The locality was first chosen as a dwelling for the white man in 1787, by a small colony of Moravian missionaries, who had migrated from a settlement on the Cuyahoga; but they were promptly notified to leave by the chief of the Delaware Indians, and they did not stop to argue the point. The first real settlement, therefore, was made by Nathan, one of the Cleveland family of Perrys. The hamlet grew until it had a few hundred inhabitants, and acquired importance as a lake port and shipbuilding center that ranked well in comparison with Cleveland. The first vessel built here was the Huntington, in 1819, by Church; from that timeon shipbuilders were legion. The builders often sailed their own vessels, until they could dispose of them. In the list of early builders we find the names of Wilson, several members of the Jones family Rogers, Lyons, Gillmore, Burnell, Cobb, Keating, Hamlin, Flint, H. D. Root, Fox, and the firm of Quelos & Peck. Between 1819 and 1870, inclusive,167 vessels of various kinds were built here.



W. R. WOODFORD,
General Manager C., L. & W. R. R.



J. E. PERRY,
Geenral Freight Agent.

The Ohio Railroad, a line to terminate at Lorain and run southward through the state, was surveyed in 1832, but the project did not receive sufficient encouragement, and died of inanition. The port grew slowly until 1851, when the construction of the old Cleveland & Columbusline gave Lorain a set-back which made the community fully appreciate the misfortune they had experienced in not securing the old Ohio line, and a desperate effort was made to induce the Cleveland & Toledo line to pass through that place; but this, too, failed and the growth of the town was pretty nearly at a standstill until the Lake Shore & Tuscarawas Valley railroad was built in 1870, this road extending its tracks the following year to Black River.

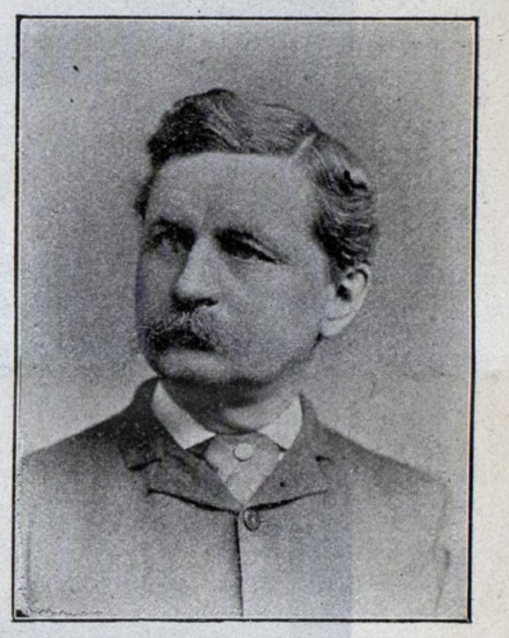
Lorain was known as Black River from the time of the earliest settlement, from the stream which forms its magnificent harbor. The town never acknowledged the name, and in 1836 asked for and obtained a charter under the name of Charleston. The following year the first and last election was held. Village officers were chosen, but through indifference they never took their seats nor performed their official duties. In 1874, the Postoffice Department was asked to establish a postoffice at "Charleston," but refused to give it that name, as there was another Charleston in Ohio. A new charter was then obtained, giving Lorain as the name of the new village, presumably after the county in which it was located. Conrad Reid was the first mayor.

With the advent of steam, and later of metal craft, Lorain rapidly lost prestige as a shipbuilding port, the industry seeking points where machinery was more available. The citizens retained, however, a lively interest in the lake trade, and most of its older families are still represented among the sailing, shipbuilding. or vessel-owning fraternity.

OFF THE PORT.

The population of Lorain in 1880 was 1,480; and 1890 it was 4,863, and a special census taken last spring showed 10,480 inhabitants. It is the lake terminus of the Cleveland, Lorain & Wheeling railroad, running north and south across the state, and is considered an important way station on the New York, Chicago & St. Louis railroad, which connects the town directly with the east and west.

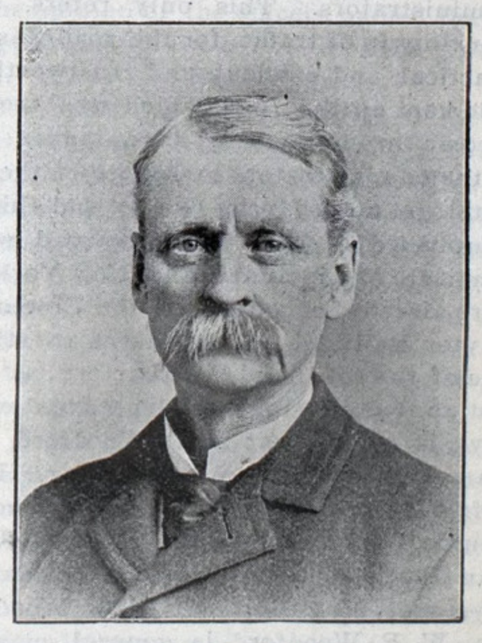
A channel ninety feet in width and 17 feet in depth has already been completed to a point above the upper furnace site of the Johnson Company's plant, almost the above distance from the mouth of the river, and a slip has also been dredged out to permit vessels to turn before returning down the river. It is the intention to ultimately increase the channel to a minimum width of 400 feet, and the land necessary for this purpose has already been acquired by the town of Lorain. The town has bonded itself in the sum of $100,000 for harbor improvement, and the work of widening and deepening the channel will proceed as rapidly as the requirements of lake commerce and the river will be maintained at a depth to correspond with the progress of the twenty-foot channel from Lake Superior. Some bends in the river are also to be straightened, resulting in the formation of basins from 600 to 900 feet wide, which will permit vessels to turn, even when the docks on both sides of the river are occupied. The harbor is easily accessible, even in rough weather, by day or night. The best way to make a good city is to "catch it young," and if the other branches of Lorain's municipality are as well started as is her harbor, she will in time be the model city of the lakes.



M. D. WOODFORD,
President C., L. & W. R. R.

Lorain has been shipping annually ab ut 600,000 tonsof coal, and receiving about 900,000 tons of ore. These will be greatly increased during the present and future seasons by the establishment of the Johnson Company's steel plant and the late improvements made to the C. L. & W. railroad's handling equipment.

Lorain is now connected directly with New York by water, having recently shipped a large quantity of steel rails by water in the boats of the Cleveland Steel Canal-boat Company, which made the trip via Buffalo and the Erie canal. The boats havejust returned with a shipment of 7,000 barrels of sugar, which has been discharged, and the six barges are about to start on a second voyage to tidewater.



E. M. PIERCE,
Agent at Lorain.

The Chamber of Commerce of Lorain is a flourishing body of eighty members. Its president is Mr. E. M. Pierce, who represents the Cleveland, Lorain & Wheeling railroad at Lorain, and has full charge of its extensive terminals. Mr. J. B. Coffinberry is vice-president, C. G. Washburn secretary, and G. B. Burgess treasurer.

THE CLEVELAND, LORAIN & WHEELING RAILWAY.

(ILLUSTRATED.)

While the establishment, a year ago, of the Johnson Co.'s steel plant, had the effect of largely increasing the population of Lorain by the process of simple addition, yet the steady growth of the town was much on a parallel with that of the Cleveland, Lorain & Wheeling Railway. Without the assistance of this great inland carrier, the port advantages would have availed little. The company was incorporated in July, 1870, under the name of the Lake Shore & Tuscarawas Valley Railroad, the primary plan being to build from the Lake Shore Railroad, at Elyria, and the Bee Line, at Grafton, to the coal fields of the south, and to send out fuel to and over those lines. After operating one year, the advantages of a lake outlet became apparent, and the Elyria & Black River Railroad Co. organized and built from Elyria to Lake Erie. The road was then absorbed the larger corporation, which some years later was reorganized as the Cleveland, Tuscarawas Valley & Wheeling Railroad, under which name it was operated until 1883, when the name was changed to the Cleveland, Lorain & Wheeling Railroad Co.

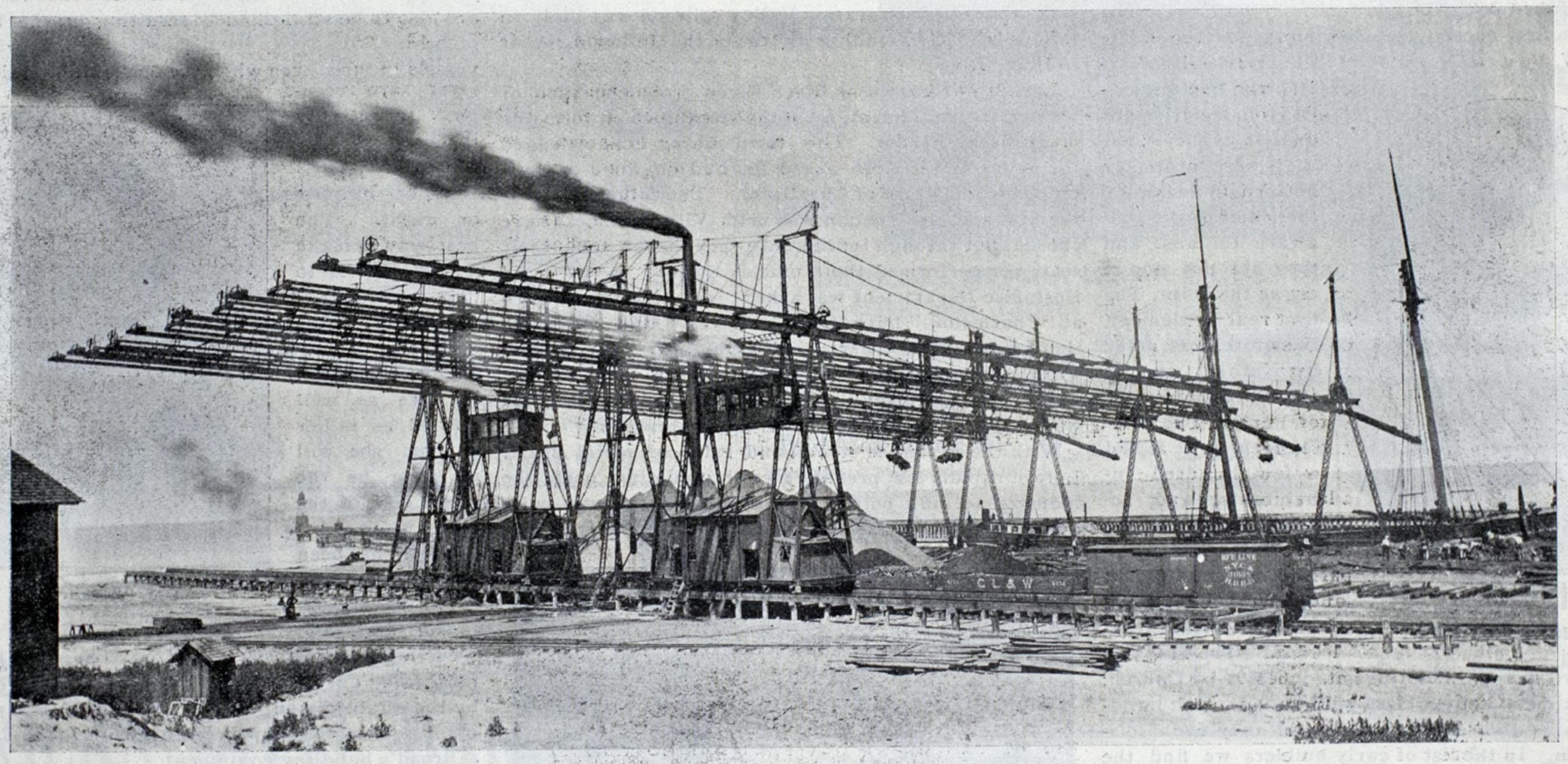
After the death of Mr. Selah Chamberlain, who was practically the owner of the road, the line was compelled to move in that unprogressive fashion which perforce characterizes estates which are in the hands of administrators. This only refers, however, to the working up of traffic, for the road was in the hands of practical and efficient and trustworthy railroad men, who kept up the road, which was then earning a good income through natural advantages. It was the desire of the administrators to dispose of the road, when they could get a good price for it, and this was finally accomplished in 1893, when the road was acquired by a syndicate of Cincinnati and New York capitalists, who were already in control of the Cincinnati, Hamilton & Dayton Railroad. Some shares are still held along the line of the road, and the directory, as re-elected at the last annual meeting, which occurred within the last ten days, is as follows: M. D. Woodford, Eugene Zimmerman, Cincinnati; James A. Blair, Henry A. Taylor, Alfred Sully, E. B. Thomas, H. F. Shoemaker, John B. Dennis, New York; W. R. Woodford, W. A. Shoemaker, Dan P. Eells, L. A. Russell, Cleveland; J. Walter McClymonds, Massillon. Mr. M. D. Woodford is president; Mr. W. R. Woodford is general manager; Mr. J. E. Terry is the general freight agent; Mr. Moses G. Carrel, the general passenger agent, and Mr. P. Bruner superintendent ofthe line. The company is represented at Lorain by Mr. E. M. Pierce, who has entire charge of the extensive ore and coal handling business of the port, and who is one of Lorain's most active and energetic business men.

When the above-named syndicate acquired control of the road, they at once saw the advisability of securing an entrance to Cleveland, and organized the Cleveland & Southwestern Railroad Co., which constructed a line from Lester, a point 25 miles from Lorain, and 29 miles from Cleveland, into the city. The two companies afterwards consolidated, the name becoming the Cleveland, Lorain & Wheeling Railway Co. The management at once set about developing and improving the coarse freight handling facilities of the port, and dnring the present season the six Brown hoists shown in the engravings have been erected, which adds greatly to the dispatch which the dock is able to give vessels, and will accommodate the rapidly growing receipts of the port.

The company has an excellent coal dock at Lorain, capable of loading about 5,000 tons per day. The dock is equipped with eight McMyler & Excelsior "whirlies," seven lifting 2-ton buckets, and one with 5-ton buckets. The dock has a capacity for 100 or more cars, all arranged with gravity switches, the engine not having to touch them from the time they are placed in the yard until they are hauled away. The "whirlies" are arranged in three sections, with platform for the buckets. The dock gives employment to about 200 men.

As will be noticed by the map, the Cleveland, Lorain & Wheeling Railroad, in crossing the state from Lake Erie to Wheeling, West Virginia, passes through a number of important coal mining and furnace localities. Branches of the line run up and down the north bank of the Ohio River to Martin's Ferry and Bellaire, and another opens up the mining regions about St. Clairsville, Ohio. The company holds close traffic connections with the roads leading from the West Virginia coal mines. The trunk line passes through such importaut and prosperous towns as Canal Dover, New Philadelphia, Urichsville, Massillon, Canal Fulton, Warwick, Sterling, Medina and Elyria, and crosses all the important east and west lines, giving enormous advantages to shippers in the routing of freight.

The principal traffic of the Cleveland, Lorain & Wheeling Railway is, as has been stated, the carrying of coal to the lakes for shipment, and the transportation of iron ore to the blast furnaces of the localities through which it passes. It has a large business, however, in the lines of general freight and passenger traffic, which promises to develop to such an extent, that to an outsider it would seem that large package freight docks and warehouses might be seen near the entrance to Lorain harbor before the lapse of many years.



GENERAL VIEW OF THE LAKE FRONT AND HARBOR ENTRANCE.

HYDROGRAPHIC CHARTS

Of Lakes Erie, Ontario, Superior, Huron, and St. Mary's, St. Clair and Detroit Rivers, for sale at the office of the MARINE RECORD, No. 144 Superior street, Cleveland. Prices 75 and 50 cents each.

NEW ENGINEERS' CHART OF LAKE SUPERIOR.

The new chart of Lake Superior, which the late Gen. O. M. Poe's office force have been competing, is now in the hands of the printers, and copies will soon be on sale at the MARINE RECORD office. The new chart is entirely on one sheet, and is printed in colors. The water is white, the land a light smoke tint, while yellow dots mark the lights and fog signals. The topography of the land for three miles back on the south shore is shown. Most of the Canadian shore surveys were furnished by the Canadian Pacific railroad, and while accurate, are not as extensive and complete as the American engineers' surveys. The Sault is shown on a small scale for convenience the large chart of the St. Mary's river being still in preparation. The latter chart will show the navigable channel in white, with varying shades of blue for the 6 and 12, foot contour lines. On the lake Superior chart compass faces appear, showing the deviations at the Sault, Whitefish Point, Grand Island, Copper Harbor, Madeline Island, and Duluth.

NOTICE TO MARINERS.

FOUND A NEW SHOAL.

Captain George M. Church writes from Detour under date of October 3 that the steamer Colgate Hoyt recently grounded on a shoal, new to all local pilots, in the St Mary's river. The shoal, he states, is located one mile, as near as may be, NE. of Pickands, Mather & Co.'s coal dock at Detour, and a large half mile due SE. of Pipe Island light. The Hoyt was rounding to with a long tow to coal at the dock, and was farther out in the channel than is usual. The captain reported the bottom level and soft with 14 feet of water over it, dropping off to 40 feet on the southeast side. The shoal appeared to be small.

SEUL CHOIX POINTE LIGHT STATION.

Correction of Notice to Mariners, No. 138 of 1895.

Notice is given by order of the Light-house Board that on September 6, 1895, a 10-inch steam whistle was established at this station, at the northerly end of Lake Michigan, to sound, during thick or foggy weather, blasts of 4 seconds' duration, separated by silent intervals of 26 seconds. The fog-signal building is a red brick structure, with red iron roof, and stands 124 feet S. 51° E. (SE. ½ E.) from the light-tower.

THE heaviest ocean tug on the Atlantic coast is being built at the yards of Murphy's Iron Works, at Jacksonville, Fla. This is the tug Three Friends. She is 127 ft. long, 24 ft. beam and 10 ft. depth of hold, and is provided with a triple expansion engine 14 inches, 21 inches, 35 inches by 24 inches, developing 600 horse power with 170 pounds steam pressure. Three Friends, besides being used as a tug, will engage in the Bahama trade during the coming winter.

From the Boston Advertiser, Sept. 25.

TRIAL OF A SIGNAL TORCH.

By direction of the adjutant-general, a series of interesting experiments were made last night by the Signal Corps, 2d Brigade, Lieut. H. W. Sprague commanding, with a new torch, at their armory on East Newton street.

The old torch was a clumsy contrivance, and it has long been evident that a change was necessary.

The torch experimented with last night is manufactured by the Graham-Meyer Co., which was incorporated under Maine laws in August, '94, with a capital stock of $100,000, headquarters in this city. Charles Meyer is the inventor of the torch, and Mr. Graham of the liquids which burn red, green, blue or white, as desired. The torch is covered by patents granted in the United States in 1894, also in Canada and in Europe. It has been approved by the national government and been adopted by the State of New York. At the conclusion of the experiments last night Lieut. Sprague expressed his approval of its working.

The Graham-Meyer torch weighs 4½ lbs. less than the torch now in use. The stick is of hard pine, 4 feet long and detachable. The lamp is a perforated cage of composition metal, with five centre drafts, and holds a quantity of asbestos, which of course is practically indestructible. Kerosene is preferred for fuel, although any oil may be used.

The lamp is enclosed in a cylindrical case of polished brass, the lower half forming a cup to catch any drippings; and the upper (when detached) may be used as a pail into which oil may be poured. One saturation will suffice for 15 minutes, the light remaining clear and steady; to extinguish—submerge the lamp in the upper half of the cylinder, whether filled with oil or not. If the lamp is submerged in water it may still be immediately relighted.

There is also a larger light manufactured by the company to be used as a footlight, which burns for 20 minutes. A light which they are making for the life-saving stations is soon to be experimented with. It is self-feeding, can be made to burn 48 hours, and by forced draft to throw a flame 25 feet. The Boston and New York pilot boats have been fitted with the ship lights manufactured by this company.

REPORT OF THE LIFE SAVING SERVICE.

The annual report of General Superintendent Sumner I. Kimball, of the Life Saving Service, for the fiscal year ended June 30, has just been published. On the date mentioned the number of stations in the life saving establishment was 247, of which 51 were on the Great Lakes—12 in the Ninth district, which includes Lakes Erie and Ontario, and the station at Louisville, Ky.; 15 in the Tenth district, Lakes Huron and Superior; and 25 in the Eleventh district, Lake Michigan.

The district officers report that there were 382 disasters to documented vessels within the field of life-saving operations. The aggregate number of persons on board these vessels was 4,014, of whom 61 perished. The estimated value of the vessels aggregates $6,872,705, and that of their cargoes $2,972,855, the total amount of property involved being $9,845,560. Of this sum $7,654,430 was saved, and $2,191,130 lost. The number of vessels totally lost was 91.

There were also during the year 214 casualties to small, undocumented craft, on which were 467 persons, seven of whom were lost. The value of the property involved in these cases is estimated at $109,810, of which $75,045 was saved and $34,765 lost.

The results of disasters to vessels of all description within the scope of the service, and the apportionment of the several lake districts is as follows:

	Ninth District.	Tenth District.	Eleventh District.	Total for Lakes.	Total for U. S.
No. disasters	80	54	131	265	596
Value of vessels..	$425,835	$934,545	$1,067,095	$2,427,475	$6,975,725
Value of cargoes ..	$81,490	$269,425	$387,310	$738,225	$2,979,645
Persons on board..	368	418	723	1,509	4,491
No. persons lost...	1	0	16	17	68
No. days succor at stations.....	9	14	83	106	*1,474
Val. property saved	$405,315	$1,113,940	$1,198,645	$2,717,900	$7,729,475
Val. property lost..	$102,010	$90,030	$255,760	$447,800	$2,225,895
Total losses vessels	4	4	18	26	91

*This includes succor given to persons not on board vessels embraced in tables, and for purposes of mere comparison the number of days succor given on the lakes should be 165.

During the year the coast telephone lines have been extended and improved, and now cover an extent of about 650 miles. The increase in salaries during the year has been productive of good results, so far as the lakes were concerned, the effect being to restore the morale of the service, and increase its efficiency.

The report contains a series of 13 very valuable tables relating to disasters on the Great Lakes, concluding with the following summary:

NATURE OF CASUALTY.	Number vessels..	Tonnage of vessels totally lost.	Tonnage of vessels damaged...	Aggregate tonnage.....	Number vessels laden.....	Number vessels light	Wrecks involving total loss.....	Casualties involving part'l damage	No. passengers...	Number in crews.	No. lives lost.....
Founderings	20	8,023	321	8,344	15	5	18	2	...	150	51
Strandings..	113	16,464	75,008	85,472	84	29	31	82	20	1,146	18
Collisions...	72	5,392	76,220	81,612	39	*25	6	66	435	1,004	31
Other causes	117	7,308	66,702	74,100	86	31	22	95	237	1,144	10
Total.....	322	31,277	218,251	249,528	224	90	77	245	692	3,444	110

*No information in cases of eight vessels.

THE new steel oil tank steamer for the Pacific Coast Oil Co., is now well under way at the Union Iron Works, San Francisco. She will be 175 feet long, 28 feet beam, 18 feet deep and will cost about $100,000. It is said that she will be one of the strongest steamers on the coast, and will fill the highest requirements of Lloyds for the transportation of bulk oil. Her capacity is to be 6,000 barrels of oil.

NEWS OF THE NAVY.

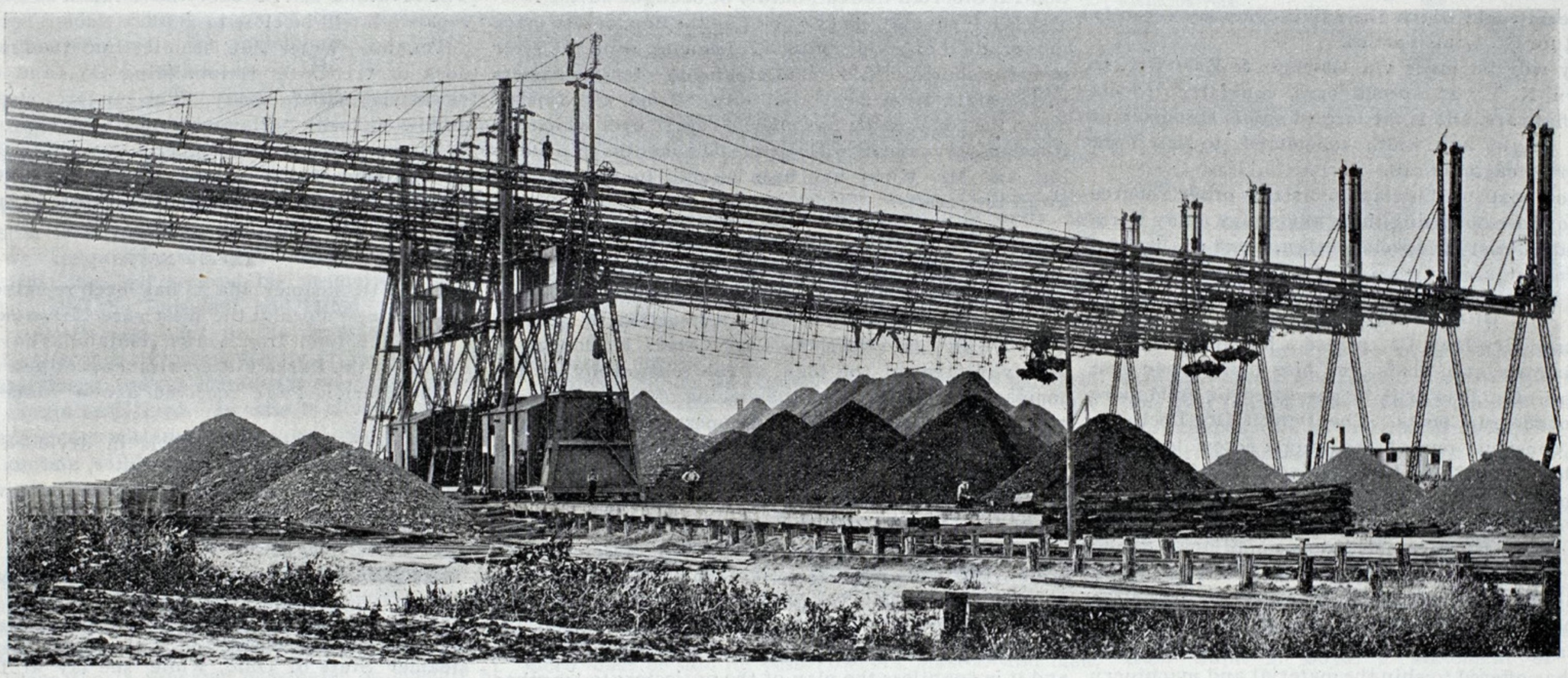
The Navy Department has been notified by the Newport News Shipbuilding and Dry-dock Co., that they will launch the Nashville and Wilmington, two of the three gunboats being constructed there for the government, on the 19th inst.

Capt. Robley D. Evans, "Fighting Bob Evans" of the cruiser New York, has been transferred to the new battleship Indiana. Capt. Winfred S. Schley has been detached from the Board of Inspection and Survey and assigned to the command of the New York.

Secretary Herbert has awarded the contract for building two torpedo boats to Herreshoff at $144,000 each. Congress authorized the construction of three torpedo boats—one to be built on the Atlantic coast, one on the Pacific coast and one on the Mississippi River. There was no bid received from the Mississippi, and an agreement was entered into with Herreshoff to construct two of the vesseis. A bid was received from Moran Bros., of Seattle, Wash., but it is still under consideration.

The report of Engineers Perry and Norton on the lake steamer North West has been submitted to Secretary Herbert. These officers some weeks ago made the trip from Buffalo to Duluth and return on board this vessel and made an exhaustive inspection of the boat and of her machinery. The primary object of their trip was to obtain information as to the performance of the Bellville boilers, with which this ship is supplied. The report speaks in complimentary terms of the vessel itself, but it is the opinion of the officers named that the boilers are not good enough for adoption of the type in the naval service.—Army and Navy Journal.

Secretary Herbert will ask the next Congress to authorize the construction of two training ships for the use of naval cadets, and Chief Naval Constructor Hichborn has submitted estimates, fixing $500,000 as the amount required to build them. The estimates will be one of the features of the Secretary's annual report. The vessels are to be supplied with sail power only, and are to have sheathed bottoms. While steam has practically superseded wind as a motive power for vessels, the authorities believe that it is wise to continue practicing the embryo naval officers in the use of sails. Should the new ships be authorized they will be of the most modern character, with the exception of steam machinery, and will be supplied with heavy battery. If the vessels are authorized, it is the intention of the authorities to make them of about 1,400 tons displacement. They can be used for training seamen as well as cadets in the use of sails.



VIEW OF CLEVELAND, LORAIN & WHEELING ORE DOCKS.

WITH the acceptance of the St. Paul by the Government the United States will have at its disposal four first class auxiliary cruisers—the St. Paul, the St. Louis, the New York and the Paris. The ocean mail contract will go into effect on Oct. 12, and after that date the vessels named will carry the greater part of the mails between the United States and Great Britain.

SHIP BUILDING AND REPAIRS.

THE GENERAL OUTLOOK.

A lull has occurred in the placing of orders for new tonage, a condition which may be attributed partially to the fact that the quota of the shipyards is pretty well filled, but mainly to the easier market in ship building material, which has led to the postponement in the placing of contemplated orders. Ship building material can be obtained now at a lower figure than a month ago, and while the difference is not sufficient to make any appreciable difference, yet it has had the effect noted.

STEAM BOATS BY RAILROAD.

A prominent steamboat excursion company at Jamestown, N. Y., has closed a contract with the Marine Iron Works, Chicago, for two exceptionally fine flush-decked steam yachts for use next season on Chautauqua Lake, each boat to be 50 feet long, by 10 feet beam.

The general arrangement, deck plan, engine house, toilet room, etc., are of a character that will render them not only attractive but very convenient, and yet leave a surprising amount of deck room. Each yacht will carry 75 passengers comfortably and safely, and in addition there is space arranged for a dozen musicians on the forward upper deck, with neat swinging awning suspended above this "band deck."

The contract was was given after inspection of a similar steam yacht which the same company recently completed for St. Louis parties.

Delivery will be made via Chicago & Erie Ry., to Jamestown, N. Y., an special cars, equivalent to six ordinary flat cars, and is the largest single shipment of the kind, height and width considered, to New York state from Chicago, by rail.

Excursion boats of this class invariably prove a source of profit to those operating them and repay many times over the added cost for special design, extra quality and attractive finish.

BID ON GUN BOATS.

The Detroit Dry-Dock Co., placed a bid in the contest for building six gun boats, the bids being open last week. No single firm will be permitted to build more than two of the gun boats. The Detroit Dry-Dock Co. offered to construct one of the single screw boats for $215,270, deducting $2,250 for the windlass, $1,000 for the steering gear, and $2,500 for the electric lighting plant, if these were not to be furnished, or to build two of the boats for $429,000 under the same conditions They offered to build one of the twin screw vessels for $213,750, adding $2,500 for electric plant, $2,250 for windlass and $2,200 for steering gear if these were desired. In order to avoid conflict with the neutrality laws the company has offered to ship the material and machinery to Seattle, Wash., Puget Sound, and to construct the vessels there. These were the lowest bids on both classes of boats. Lewis Nixon, of the Crescent shipyards, Elizabeth, N. J., bid on one vessel $238,000, deducting $10,500 for electric lighting plant, $3,200 for steam windlass, and $3,000 for steam steering gear if these parts were not furnished. The Union Iron Works, San Francisco, bid $246,000 on the single screw and $215,000 on the twin screw boat with similar deductions; the Bath Iron Works, Bath, Me., bid $229,400 on one single screw boat, with certain exceptions, noted in their specifications. J. H. Dialogue & Son, Camden, N. J., offered to construct any two vessels for $460,000, with certain exceptions noted in their proposal. The limit of cost had beeu placed at $230,000 each.

There seems no doubt of the Detroit Dry-Dock Co. receiving the award for two boats, as there is no apparent legal ground for refusing them the contract.

Negotiations are in progress whereby the Detroit Dry-Dock Co. expect to secure the contract for another steel steamer. The mold loft at the shipyard in Wyandotte, is being made ready for the molds or the new boat.

WITH EMPTY HANDS.

Mr. Frank E. Kirby, of the Detroit Dry-Dock Co., arrived home Sunday night after a stay of two months or more in Russia. Intervening circumstances have arisen which have prevented the placing of an order for car ferry steamers by the Russian government, but Mr. Kirby says he returned with the assurance that if they were built the Detroit Dry-Dock Co. will get the contract.

The hitch arises apparently out of a change in administration, the new Minister of Ways of Communication, Prince Khilkov, evidently refusing to endorse the acts of his predecessor in the matter of the Trans-Siberian Railroad. Last March, at a meeting of the committee of the Siberian Railroad, presided over by the Emperor Nicholas, the minister proposed the appointment of a special commission to be presided over by the vice-Minister Gen. Petrov, and consisting of seven engineers and other specialists. This was approved. The Minister of Finance then brought up the question of a commercial harbor at Vladivostok and suggested the necessity of surveying and examining the place. This second expedition was approved. Both parties left St. Petersburg at the end of May, one going over land to Irkoutsk, and the other by water to Vladivostok. The meeting place was to be Irkoutsk, where the two parties met about the end of August.

It was originally intended to construct Vladivostok harbor in the Bay of Golden Corn, and to make it 1,540 feet long and 26 feet deep, at a cost of $250,000. This was recommended in July, but it is now stated that the Russian government is seriously considering the idea of changing the rule of the road and making Port Arthur the Asiatic port instead of Vladivostock. The track is now laid on the whole of the Western Siberian railroad, or as far as Omsk. Even if the route of the eastern part of the road is changed radically, the route of the Central Siberian line can hardly be changed unless Irkoutsk is left out entirely as a point on the line, or else made the terminal of a long branch. Irkoutsk is on the river near the shores of Lake Baikal, and the ferry steamers would start from near that city. From all appearances the commission has made a report over which the Russian government will spend some months in pondering, and Mr. Kirby has been unable to remain and await the results.

AMONG THE DRY-DOCKS.

While the directors of the American Steel Barge Co. have not acted upon the subject, it is stated that they have under consideration the construction of another dry-dock at West Superior. Capt. Alex. McDougall is openly in favor of the plan, as the topography of the company's property, and the placing of the machinery would allow a second dock to be operated very economically. For a large part of the winter, however, the ice at West Superior is too thick to allow of the successful operation of a dry-dock.

Henry Botsford, of Port Huron, owner of the Wolverine dry-dock, and several well-known vessel owners, are having plans made for a new dock, to be constructed of steel, 360 feet long by 50 feet wide, and 20 feet deep on the miter sill. The length on these dimensions seems very short in proportion to the width and depth, and it is doubtless the plan of the projectors to lengthen it when the size of the boats may render it advisable.

The new Craig dry-dock at Toledo is practically completed, as noted elsewhere.

The Ship Owners' dry-dock extension of 100 feet is rapidly nearing actual completion, the basin having been in shape for business for two weeks past. The dock is now 450 feet long, and can accommodate the largest boats that will be afloat inside the next two years.

GENERAL REPAIR WORK.

The week has been devoted by the local dry-docks chiefly to minor repairs many of them necessitated by the late rough weather. At the Cleveland dry-dock the Rube Richards received a general overhauling the latter part of last week; the Alcona Wyandotte, and Fitzhugh had their bottoms calked this week; the Nimick went in to-day to stop a leak, and the Corsica is expected to arrive to-night and to get into the dock Friday. The Corsica has a hole in her bow 12 feet wide, as a result of her collision with the Fryer, which she seems to have knocked over the ropes. Repairs are likely to consume a week or ten days.

At the Ship Owners' dry-dock the Wallula was in with a loose wheel and pintle, and required some calking; the A. L. Hopkins had two broken holding-down bolts replaced; the Sitka received two new buckets on oh her sectional wheel; the Iron Chief was in with a loose wheel; the Horace A. Tuttle had a loose pintle and stopped a leak. The B. F. Bruce got out early this morning, after receiving a new forefoot.

CHICAGO.—At the Chicago Shipbuilding Co.'s dry-dock, one of the Michigan & Wisconsin Co.'s car ferries was in this week for repairs to her rudder. The Goodrich Transportation Co.'s steamer City of Racine was in for some calking and repairs to her stern bearings.

At Miller Bros.' shipyard the schooner Kate Lyon was in dock for some bottom calking; the tug H. S. Sill for repairs to her shoe; the steamer City of Traverse for repairs to her stern and some calking; the tugs Protection and Rebel for some bottom calking; the tug William Dickinson for repairs to her shoe; the steamer H. A. Root for repairs to her stern bearings; the schooner Levi Grant for some bottom calking, and the tug Mentor for a new shoe.

WEST SUPERIOR.—The steamer Montana has unloaded her flour cargo, which is badly damaged, and has gone into the American Steel Cargo Co.'s dry-dock. She received heavy damage to her bottom from the rocks at Portage Entry. Many of the rocks remained stuck between the planking being covered with a jacket which the wreckers placed over the holes, for nearly 75 feet back from her stem the bottom planking and parts of the keel had to be renewed, and she required a new shoe. Her rudder was all right, but the rudder post was broken and had to be replaced. Her seams are badly strained, and nearly all of them will have to be re calked. Small bidders have been trying to get hold of parts of the damaged cargo but it will probably go to Buffalo in bulk for disposal. Less then 1,000 out of 12,000 was left dry. The Montana will probably have the dock Friday. Her repair bill will be close to $8,000.

TOLEDO.—Water has been let into the fine new dry-dock of the Craig Shipbuilding Co, and everything works very satisfactorily. The car ferry steamer Shenango No. 2 will be launched next week, probably, and will be out about November 1. Captain Dority has relinquished the command of the No. 1 to Captain McLeod, and will return here to superintend the finishing of the No. 2.

REPAIR NOTES.

The little steamer Ida E. has been re-calked and received a new stern at the West yard Milwaukee.

The McKinnon Iron Works, Ashtabula, have fitted the engine of the Parks Foster with a set of new frames.

The Marion Page received a new rudder stock at Lorain.

The ferry boat Excelsior is in dry-dock at Detroit to be put in shape for the winter, and to repair the damage done to her hull by the ice last winter. It will cost $5,000 to put her in shape.

THE STANDARD AUTOMATIC RELEASING HOOK.

Capt. James Lord, representing the Standard Automatic Releasing Hook Co., gave an exhibition of the working of his device on one of the boats of the steamer State of Ohio, while she lay at the C. & B. dock. The exhibition was very successful. The men in the boat did not understand the principle and objects of the device, not having had it explained to them, and failed to understand and obey orders called to them, sometimes doing the opposite from what they were told to do; but they at no time succeeded in making mistakes that made them risk getting wet, or which would have placed them in danger in a sea.

The device is very simple and consists of a brass shackle permanently attached to each end of the boats, and a hook of peculiar design, fastened to a block through which the fall runs. This hook has a sort of inside lining on a hinge, with a weight on the outer end. This throws the hook out of the shackle as soon as the boat strikes the water, or any other object that will bear its weight. To prevent this acting prematurely a small lanyard is attached to each hook, which, when lashed about the hook prevents it from coming unfastened while the davits are swung outward. These lanyards remain permanently lashed, with a hitch which can be unfastened with a single jerk. They are not loosened, however, until the boat is out of the water, when the hook is unlashed and releases the boat immediately it touches the water.

Instead of falls at each end of the boat, by adding extra blocks only one fall is used, it being as long as two falls and supporting both ends of the boat. The result is that as soon as one end of the boat is released, the fall at the other end becomes slack, and the hook at the other end instantly acts; so that if in the excitement the boat is not lowered uniformly, it makes no difference in the release action. Capt. Lord states that he has worked this device successfully on a steamer moving 15 miles an hour. He has fitted the boats of the City of Detroit, is now putting them on two boats each of the State of Ohio and State of New York, and will furnish eight sets for the large steamer now building for that line. F. W. Wheeler & Co., West Bay City, have ordered two sets each for the four boats building at that yard. This is a very successful introduction.

THE MARINE RECORD

ESTABLISHED 1878.

PUBLISHED EVERY THURSDAY, AT 144 SUPERIOR ST., (LEADER BUILDING), CLEVELAND, O.

IRVING B. SMITH, CAPT. JOHN SWAINSON, } . . PROPRIETORS

BRANCH OFFICE:

CHICAGO, ILL., ... 238 Lake Street

THOMAS WILLIAMS, Associate Editor.

SUBSCRIPTION.

One copy, one year, postage paid, . . . $2 00
One copy, one year, to foreign countries, . . $3 00
Invariably in advance.

ADVERTISING.

Rates given on application.

Entered at Cleveland Post Office as Second-class Mail Matter.

CLEVELAND, O., OCTOBER 10, 1895.

THE murder of a canal boat captain and his son at Tonawanda for cutting the rates of the new combination will do more toward breaking up the combine than anything that could have occured. The fearful outrage has aroused the law abiding people of that vicinity, and the rioters are promised a rich punishment.

THE many friends on the lakes of Commander Nicol Ludlow will learn with regret that through what appears to have been an unfortunate oversight on the part of the President, the commander may lose the command of the cruiser Boston, to which he has been assigned. The Boston is a captain's command, and Commander Ludlow was assigned by the department under the impression that he had secured his promotion. It was learned later that the President had failed to send commander Ludlow's case back to the department. Commander Ludlow was recommended for promotion by the Examining Board, and the President's reason for holding the case cannot be divined. In case it should not come to the department within a week, some officer with the rank of captain will be ordered to the command of the Boston.

THE canard about the Northern Steamship Co. changing its headquarters to Duluth seemed at best an unlikely story. A line of this sort must buy its supplies where they can be had cheapest and in case of fuel and many provisions the rates on the lower lakes are much lower. Flour, too, is probably obtainable as cheahly at Buffalo as it is from Duluth retailers, and the same is true of nearly everything in this line. Then the freight line must look after its west-bound freight closely, and will need to do so more than ever next season. The east-bound freight is secured from the Great Northern Railroad, and comes without solicitation. While a company of this size is not disposed to display petty spite, yet at all events it could ill afford to remove its headquarters away from that important port. Instead, according to Traffic Manager Clarke, finer offices are to be secured in a more central location.

SOME FINE RECORDS.

On Tuesday, September 24th, the steamship S. S. Curry delivered a cargo of 2,992 gross tons of ore at South Chicago from Lake Superior. On the following Thursday she delivered 3,883 gross tons from Escanaba, and on Tuesday, October 1st, one week after delivering her first cargo, she unloaded 3,875 tons from Escanaba. Giving her three days to unload and get down from Lake Superior with her first load, the Curry carried 10,750 gross tons of ore in ten days.

The following was received late last week from the Sault: "EDITOR MARINE RECORD:—While there are some of the 'fly' ships on the lakes, making 15 and 16 miles per hour, the steamship Yuma has delivered five cargoes of ore from Ashland at South Chicago and Cleveland during the month of September."

The schooner Aurania, on Tuesday, the 8th, loaded an even 4,000 tons of ore at Ashland, breaking her own record, and carrying 700 tons more than any boat ever loaded.

A GOOD MAN DULY HONORED.

The St. Mary's Falls canal suspended operations from 3 until 5 o'clock last Saturday afternoon, by order of the Secretary of War, as a mark of respect to Gen. O. M. Poe, during which hours his funeral services were conducted with military honors in Detroit. The regular army and Michigan state militia and naval reserve were well represented in the procession, and a squad of his old regiment in the late war, a mere score of them left, followed their old leader and comrade to his grave. The closing of the Sault lock was made, as noted last week, at the suggestion of the Lake Carriers' Association and vessel men generally, and the flags of the lake fleet float at half mast for the man whose personal efforts have meant so much in the advancement of the commerce of the Great Lakes. As expressive of their regret and appreciation, which was supplemented on the part of many of them, with a feeling of personal grief at his loss, the finance and executive committee of the Lake Carriers' Association adopted the following, last Thursday.

Resolved, That in the death of Gen. O. M. Poe the lake interests have sustained a great loss. After a distinguished career in active service in time of war, he devoted his great talents and energies to the accomplishment of yet greater achievements in advancing the internal commerce of his country.

For many years in charge of the principal works of government improvement on lake channels he not only kept pace with the march of events, but was ever in advance, anticipating the demands—foreseeing the necessities—advising and urging the proper improvements until his name has been, and always will be, indissolubly identified with the deeper channels, the improved facilities and the growth of commerce on the Great Lakes, to whatever proportions these may in the future attain; and to him is due the gratitude of a nation, so signally benefitted by the cheap water transportation afforded so largely by his aid.

To such a man the stupendous works at Sault Ste. Marie will be a fitting monument, serving in daily use a dependence upon them to remind the public of his great services. His personal attributes of courtesy and affability, the graciousness and kindness of the man endeared him to all who come in contact with him socially or in his official duty, and he leaves behind the sweet savor of a good life well spent in the able discharge of important duties.

Resolved, That we express our deep sense of personal loss in the death of Gen. Poe, and to his immediate family we extend our sympathy.

Resolved, That these resolutions be spread upon the records of the Lake Carriers Association and that a copy be sent by the secretary to the family of the deceased.

At a similar meeting of vesselmen held in Detroit at the same hour, the following expression, submitted by President William Livingstone of the Lake Carriers' Association, was adopted:

When those engaged in the carrying trade of the Great Lakes speak of Gen. Orlando M. Poe something more must be said for vessel owners, masters and men, than that he was an engineer of world-wide fame, a soldier of unblemished and brilliant record, an American citizen of the highest patriotism, a devout friend, a good neighbor, and an honest gentleman. It is an inadequate expression for them to repeat these virtues of the dead, and to say, in common with all his fellow-citizens of the republic, and with all his friends and neighbors, merely that we deplore his loss.

For almost a generation, Gen. Poe has been held in the minds of all engaged in lake navigation, as in and of himself—with his great ability, with the confidence which was reposed in him by all the branches of our government, with his great appreciation of, and his devotion to the lake interests—as a distinct safe-guard to human life and to property.

From the poorest sailor to the largest owner engaged in the great commerce which holds down transportation charges for all the producers of the great northwest, all have known that Gen. Poe has stood for years against all influences, direct or indirect, at home and at the seat of government, not only against any encroachment upon the rights of the lake carriers, but also for the broadest and most liberal treatment of their business, and for the removal of every obstacle upon the great highway upon which they traverse, he has stood like a rock for their defense when attacked always; and his position has been of a value which cannot be estimated by the people of the northwest, when we consider that a recommendation from him to a president, or to a congress of the United States, has seemed equivalent to the actual relief recommended.

He has left guarantees of safety to life and property along the pathway of his career, since he first entered the Light-House Board, through his incumbency as chief engineer in command, until death came to him.

We but express the universal feeling around these lakes when we say that his loss to us is a great public calamity, and a personal bereavement to every sailor and every vessel owner.

As a further expression we direct that for the period of fifteen days vessels carry their colors at half mast, and request the other owners on the lakes to do likewise.

Lieut. James B. Cavanaugh, who for some time was principal assistant to the late Gen. Poe, will be placed in charge of the engineering works in the Northwestern division until Gen. Craighill's return to Washington, when a permanent assignment of some officer to succeed Gen. Poe will be made.

SAULT CANAL TRAFFIC.

Following is the monthly report of General Superintendent E. S. Wheeler, of the St. Mary's Falls canal, for the month of July, and the figures up to date:

EAST BOUND.

ITEM.	Sept. '94.	Sept. '95.	To Oct. 1, 1894.	To Oct. 1, 1895.
Copper, net tons	13,190	12,811	74,355	81,581
Corn, bushels	110,968	53,000	1,425,571	69,859
Building stone, net tons	2,375	7,097	17,970	20,917
Flour, barrels	1,208,177	1,197,653	5,731,472	5,874,245
Iron ore, net tons	1,040,429	1,090,343	5,247,323	6,574,495
Iron, pig, net tons	2,410	2,169	15,891	17,978
Lumber, M	104,736	111,776	540,369	607,108
Silver ore, net tons	.....	.....	412	100
Wheat, bushels	5,396,244	5,777,246	18,913,974	17,432,374
Unclassified freight, net tons	16,466	10,977	100,193	110,331
Passengers	2,281	2,225	12,731	14,473

WEST BOUND.

ITEM.	Sept '94.	Sept. '95.	To Oct. 1, 1894.	To Oct. 1, 1895.
Coal, hard, net tons	73,755	61,004	362,078	257,642
Coal, soft, net tons	552,930	407,626	1,487,757	1,471,102
Flour, barrels	30	.....	783	2,150
Grain, bushels	5,000	4,000	7,500	35,650
Manufactured iron net tons	6,136	9,645	21,043	55,547
Salt, barrels	43,231	20,148	143,107	177,868
Unclassified, net tons	39,163	37,463	177,238	204,613
Passengers	1,821	2,030	12,747	15,149

East bound freight, net tons	1,613,467
West bound freight, " "	519,211
Total " " "	2,132,678

NOTE.—Canadian canal opened to commerce Sept. 9, 1895, at 7 o'clock, a. m.

E. S. WHEELER,
Assistant Engineer and Gen'l Superintendent.

The report shows an increase in everything for the month excepting the freight tonnage, which is due to the fact that the Canadian lock has been opened and in operation since September 9, and that 414 vessels have been locked through it, having a registered tonnage of 312,924 tons. The report allows a difference of 77,950 tons over that of 1894. The combined tonnage of the two canals shows an increase of about 150,000 tons over the corresponding month of last year. Following is a comparative statement:

	Passages.	Reg. Tonnage.	Freight Tonnage.	Passengers.
September, 1894	2,143	1,966,175	2,120,628	4,102
September, 1895	2 218	2,105,047	2,182,678	4,255
	75 Increase.	138,872 Decrease.	77,950 Increase.	153 Decrease.

The RECORD received by mail Thursday morning from Supt. J. Boyd, a statement of the freight tonnage passing the Canadian canal since September 9, when it was thrown open. The traffic represents 182,030 tons, of which, 106,885 were carried east, and 75,155 tons passed through west bound. There were 2,355 passengers locked through. The report of the first month's business is: East bound—Net tons copper, 100; net tons iron ore, 101,786; net tons pig iron, 300; bushels wheat, 1,416,963; bushels grain other than wheat, 132,000; feet lumber, 8,862,000; barrels flour, 47,280; net tons unclassified freight, 4,699; number passengers, 1,278. West bound—Net tons coal, bituminous, 59,693; net tons coal, anthracite, 6,800; net tons iron manufactures, 728; barrels salt, 3,110; net tons unclassified freight, 7,924; number of passengers, 1,077.

THE FREIGHT SITUATION.

The rates from the head of Lake Superior have continued to advance during the week, and 5c. is being freely paid on wheat from Duluth and Fort William to Buffalo. This has forced the ore rate up, but it remains unsettled at about $1.65. A block of Hale ore for Buffalo has been placed at $1.75. The Escanaba rate has gone to $1.25, brought up by offers of 4c. on wheat from Chicago for next week's loading. Such freights as 4c. Chicago to Buffalo, and 90c. on coal back, will divert many boats into the Lake Michigan trade, and tend to still further advance the Lake Superior freights.

The Iron Trade Review estimates that about 8,100,000 tons of ore was moved up to October 1. This estimate is held by ore men to be very close.

THE MARINE RECORD is the headquarters for marine publications of every description. No. 144 Superior St.

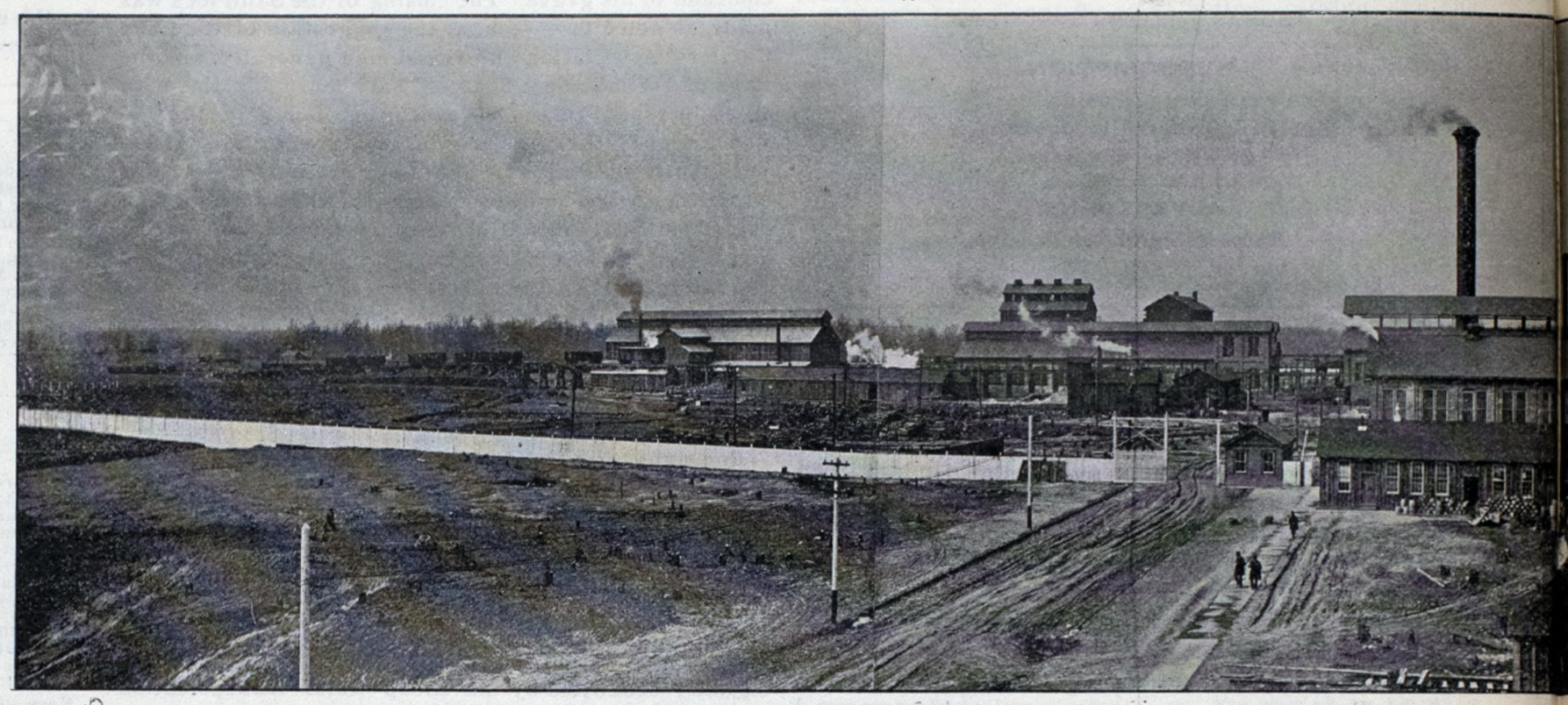
THE JOHNSON STEEL PLANT.

(ILLUSTRATED.)

One great cause of the sudden revival of Lorain as a lake port lies in the establishment just south of that town, on Black River, and within Lorain's corporate limits, of the immense Johnson steel mills, which were located and built between the months of June, 1894, and April, 1895. The Johnson Company was organized in 1883, and its mills were located at Johnstown, Pa.; during the next decade, however, conditions of trade changed so materially that the company began laying plans for the erection of a plant which should combine all necessary processes from the ore to the finished product, at a competitive transportation point, which would render it independent of all middlemen and enable it to compete on equal or advantageous terms with the most modern mills. After carefully looking over all the available ports on the Ohio shore of Lake Erie, the directors of the Johnson Company fixed upon Lorain as the proper site for their plant, and proceeded to purchase 4,000 acres of land adjacent to Black River. Of this, 1,700 acres were set apart for manufacturing purposes, one-third being on the north bank of the river, and the remainder, nearly 1,200 acres, comprising a continuous tract, bounded on two sides by the river, and on the third by the tracks of the Cleveland, Lorain & Wheeling Railroad. The total river frontage is over six miles, three and one-half of which is already navigable water. Of this 1,700 acres 600 acres is set apart for present and future uses of the Johnson Company, and the remainder is held for disposal for manufacturing purposes only, to legitimate enterprises which may desire to locate there. Neighboring tracts have already been cut up into allottments, and a small village has already sprung up near the steel plant.

THE JOHNSON COMPANY'S NEW

Construction begun June 11, 1894.



PHOTOGRAPHIC VIEW OF THE STEEL PLANT LOOKING

Cupola House. Converter Building. Boiler House.

Bottom House.

Power House.

Through the courtesy of the Iron Trade Review, THE RECORD is enabled to present very clear photographic views of the entire steel plant of the Johnson Co. All the buildings erected thus far, twenty in number, are comprised in an enclosure containing 86 acres of land. The boiler house, which furnishes steam for the Bessemer mill, is of brick with an iron roof, 75 feet in width and 155 feet long. Four batteries of National Water Tube Boilers, with a total capacity of 4,500 horse-power, occupy one side of the building. The coal is carried in on an elevated track running the full length of the building, on the side opposite the boilers and dumped into capacious bins beneath. From these bins the coal is elevated by a traveling conveyor to hoppers from which it is fed to the furnaces through iron pipes. Slack coal is used, which greatly reduces the cost of fuel. A single large stack, 13½ feet in diameter and 180 feet high, furnishes the necessary draught, which, together with the water supply, is regulated automatically. Another boiler house, similar in size, with slightly greater capacity, furnishes steam for the shape mill. The main steam pipe from the boiler house passes into the power house, a few feet distant. This building is also of brick and is 53 feet in width by 222 feet long. It contains two Siemens-Halske generators, each directly connected to a Buckeye compound engine of 250 horse-power, which furnish current for the electric cranes throughout the works; four Straight Line engines, belt-connected to General Electric generators, furnishing power for the Lorain-Elyria Electric Railroad; Westinghouse and Brush arc light machines; three Sturtevant fans, which supply the blast for the cupolas, and the immense blowing engine, supply-ing necessary air for the converters, built by the Southwark Foundry and Machine Co., Philadelphia. This is a compound condensing engine, having 36-inch high pressure and 72-inch low pressure cylinders, with 60-inch stroke, and blowing tubs 70x60 inches. A Worthington pump of 1,000,000 gallons capacity and a 1,500,000 gallons Davidson pump furnish water for general service; two Barr pressure pumps connected to hydraulic accumulators, weighted to give a pressure of 500 pounds per square inch; and two Worthington boiler feed pumps complete the equipment.

The dry bottom house, in which the ladles and converter bottoms are lined with refractory materials, requiring subsequent careful drying, is of iron, 176x95 feet. It contains two converter-bottom ovens and two sets of furnaces of four each, for drying ladles. The traveling electric crane of 15 tons capacity was made by Yale & Towne. A 100-horse-power Russell engine furnishes power for the crusher and grinding pans for reducing and mixing the refractories. Belt conveyor, facilitate to the utmost the handling of these materials.

The cupola house is 72 feet by 45 feet in size, equipped with four cupolas 25 feet in height and 10 feet in diameter. It contains two Crane hoists and possesses special facilities for disposing of cinder and slag.

The converter building is 85x90 feet in size, of iron throughout. It contains two 12-ton converters and two Spiegel cupolas, 8 feet in diameter by 20 feet in height. A 20-ton hydraulic crane is provided for the ladles, into which the blow is cast from the converter. The pit furnace house is 80x100 feet in size and contains two six-hole ingot soaking pit furnaces, served by two Morgan electric cranes.

The 38-inch blooming mill, located in an adjoining building, is driven by a double-cylinder reversing engine, capable of generating 10,000 horse-power and possessing cylinders 55 inches in diameter by 60-inch stroke. An overhead traveling crane of thirty-five tons capacity permits quick handling for roll changes and repairs. The tables are operated by Crane engines and the blooms are sheared to weight by Long & Aistatter steam shears.

The gas producers, which supply fuel for the soaking-pits and shape-mill furnaces, are eight in number, and occupy an iron building 75x70 feet in size.

PHOTOGRAPHIC VIEW OF THE STEEL PLANT LOOKING SOUTH

Finishing Building. Splice Bar Shop. Shape Mill Boiler House. Heating Furnace Building. Blooming Mill

The rail or shape mill consists of seven adjoining buildings containing the furnaces, roll train, hot saws, hot beds, straightening machines and cold finishing department, and covers an area whose outside measurements are 820x440 feet.

The roll machine shop, 50 feet in width and 400 feet long, contains the necessary equipment for turning the

rolls, and a small machine shop for general repair work. Here are also stored scores of rolls, carefully arranged for ready identification.

The splice bar shop, 50 feet by 80 feet, completes the list of buildings.

A unique feature is the reservoir formed by building a dam across the mouth of a large natural ravine, impounding a body of water estimated at 65,000,000 gallons. This water is used for boiler and condensing purposes, being conducted to a large well near the boiler houses through a subterranean tunnel some thirty feet under ground. This tunnel is cut through the shale rock for a distance of over 3,000 feet. After use the water is returned to the reservoir through an open conduit. Wasted and contaminated water is replaced from the river by pumps, operated automatically by motors receiving their current from the power-house, a half mile distant.

The economy thus obtained by doing away with the necessity for lifting daily to the height of forty feet the enormous amount of water required for condensing purposes by a plant of this nature, can be readily understood.

EW STEEL PLANT AT LORAIN, O.

4, First Blow, Monday, April 1, 1895.

GROM THE COMPANY'S OFFICE TOWARD BLACK RIVER ON THE NORTH.

Pit Furnace House. Blooming Mill. Heating Furnace Building. Shape Mill Boiler House. Hot Bed Building. Gas Producers. Hot Saw Building. Finishing Building. Roll Changing Shop. Straightening Building. Roll Machine Shop.

The company is about to proceed with the erection of four blast furnaces having a total daily capacity of probably 1,200 tons of pig iron. These will be located near the river at a point about 2½ miles from the lake. The furnace site is on high ground, 40 feet above the water level, an abrupt bluff forming the bank of the river in the immediate vicinity. Docks will be constructed atthe foot of the bluff, space being left between the bank and the water's edge for two railway ample capacity will be stationed upon the table land tracks. Hoists of the most improved type and of above, and will unload the ore from the vessels directly onto the furnace stockpile. Limestone may also be brought in by boat from Kelley's Island at a minimum cost.

TH FROM A POINT BETWEEN THE WORKS AND BLACK RIVER.

Pit Furnace Building. Boiler House. Power House. Converter Building. Cupola House.

The construction of these furnaces alone will cause an increase in receipts at the port of Lorain, amounting to 600,000 tons of ore and 200,000 tons of limestone. This will be still further augmented by reason of the recently improved facilities of the C. L. & W. Railway for handling interior shipments, and it is confidently predicted that within two years Lorain will stand next to Cleveland and Ashtabula in the tonnage and value of her receipts and shipments.

The Iron Trade Review, in commenting upon the Johnson Company's plant, says: "It is hard to see how anything further could have been provided that would contribute to the economy and rapidity of the operations coming between the cupola house and the finishing mill. The modernizing of every feature of the equipment, added to the well known advantages of the lake site in assembling materials and in getting the product into important markets, makes the enterprise one from which more and more promises to be heard in the Central Western steel making."

A LAUNCH AT CRAMPS.

The Wm. Cramp & Son's Shipbuilding and Engineering Co., launched on Sept. 30, the new steel steamer Curacao. She was built to the order of the Red "D" Line of New York, Boulton, Bliss & Dallet managers, for the freight and passenger service of the line between New York and Maracaibo direct. The Curacoa is a vessel of about 1,600 tons gross, and has a cargo capacity of about 75,000 feet. She has been built to fulfill the government requirements for steamers of the fourth-class mail subsidy as well as for the highest classification in the Record of American and Foreign Shipping. The dimensions of the steamer are: Length over all 256 feet; beam, molded 38 feet 5 inches; depth, 17 feet. The hull has been constructed throughout of the best quality tested American steel, with high bulwarks and steel deck houses on the main deck. There are five water-tight bulkheads provided. The water ballast tanks have a capacity of 200 tons. The engines are of the triple expansion type, having cylinders 18, 28, 45 inches in diameter, with a stroke of 32 inches. The boilers furnish steam at a working pressure of 60 pounds; all of the machinery fittings are of the most approved type, independent circulating and air-pumps, an ash hoist evaporator, grease extractor, etc., are provided. Steam winches are also provided for the working of cargo. The Curacoa is provided with Williamson's improved steering gear. Her speed is to be 12 knots

OUR EXCHANGES.

Beginning with its first print in November (Nov. 2d), The Age of Steel will be issued in two separate and distinct editions, alternating weekly with each other (with the exceptions named below for certain weeks), one of which will be a "Mechanical Edition" and the other a "Hardware Edition."

The native wife of an English merchant figures as a character of secondary importance in Julian Ralph's story, Alone in China, which is one of the prominent features in the current number of Harper's Magazine. In the November number the fortunes of the same character will be traced, her anomalous position furnishing the author with an opportunity for a vigorous charactertization of Oriental society.

The American Engineer, one of the first-class monthly magazines of the trade, announces that hereafter it will be issued bi-weekly, each issue containing half as much reading matter as at present. The price per copy has also been cut from 25c. to 10c. and the annual subscription from $3 to $2.50.

After a very successful career of six months, that bright Duluth trade journal, The Northern Lumber man, begins its second volume by changing from a weekly to a bi-weekly. The size will be correspondingly enlarged, and its present high tone kept up.

The September number of Traffic is devoted especially to the business and especially the transportation interests of Philadelphia. It is profusely illustrated. The October number will be published in the same form containing portraits and biographies of the members of the Pennsylvania commission and the Philadelphia councilmanic committee at the Atlanta Exposition, besides a series of illustrated articles describing the principal industries of the state of Pennsylvania

c

NEWS AROUND THE LAKES.

CHICAGO.

Special Correspondence to The Marine Record.

The Peabody Coal Company unloaded the steamer Robt. Mills last week with the new Bogle Company's system which consists of clam shell buckets, and steam shovels, which are used in the hold to convey the coal to the hatchways doing away with a great deal of labor. The R. Mills was loaded with 2,168 tons of hard coal, and the cost of unloading was 4 6-10 cents per ton. The Bogle company also put in their system of conveyors, elevators and revolving screen to take the screenings from their hoppers whilst loading teams and cars which consist of two 24-inch belts 600 feet long; two vertical elevators 68 feet centers which deliver the screenings into the revolving screen, which separates the slack, p a and nut, and places them in separate bins all clean, ready to reload. This system is operated by one man, who looks after the loading of the teams and also the cars. It would be well for any persons interested in the use of coal handling machinery to call at Peabody's dock and see the machinery in operation.

The steamer Saugatuck, when leaving Chicago Saturday night for Saugatuck, was disabled by the breaking of the end of her connecting rods. A tug towed her into one of the Illinois Central ships, where repairs are being made to her machinery by Robert Farrant.

The Graham & Morton Transportation Co.'s steamer City of Louisville has been taken off the route between Chicago and St. Joseph and is now running between St. Joseph and Milwaukee. The Company'ssteamer City of Chicago, continues in commission between Chicago and St. Joseph.

The steamer Puritan was taken off the route between Chicago and Saint Joseph last week.

The H. W. Williams, of the Williams Line, running between South Haven and Chicago went into winter quarters at South Haven last week.

The Goodrich Company's steamer Virginia left here Saturday morning on her last trip of the season, and has gone to Mantowoc where she will go into winter quarters.

The schooner Sunrise, Capt. Duncan Buchanan, with lumber from Alpena arrived here on Tuesday morning. She was reported missing in several Chicago daily papers on the morning of her arrival.

The Goodrich Co.'s steamer Atlanta, having received repairs, arrived here Tuesday and will take the place of the steamer Virginia on the West Shore route.

DULUTH AND SUPERIOR.

Special Correspondence to The Marine Record.

The North West and North Land are both laid up in winter quarters in the Lake avenue slip, and are being rapidly dismantled, carpets and furnishings being snugly stowed away.

In the demurrage case of James McBrier, owner of the Nyanza, *vs.* the latter's cargo of hard coal and the Pioneer Fuel Co., the libelants have filed in the federal court their answer to the cross bill of the respondents.

The Genoa Iron Co., has incorporated to conduct mining operations in townships 58 north range 17 west, St. Louis county, with a capital stock of $500,000. The stockholders are Chicago parties.

Receipts by lake the past week have been unusually small owing to the prevalence of terrible equinoctial gales that have seldom been equalled for severity or duration. Total coal receipts last month were 348,242 tons (including about 8,000 received at Two Harbors) against 420,799 one year ago. Of last month's receipts 139,693 is credited to Duluth and 208,549 to Superior. Duluth a year ago received 185,200 and Superior 235,599. In August the two ports received only 338,640 tons, of which Duluth was credited with 123,619 and Superior with 215,021.

The lumber mills are closing down, one after another and the indications are that there will be no winter sawing. It is estimated that the future shipments this season will be about equal to the output of the mills, so that the equivalent of the lumber now on the docks will be ready for shipment next spring, In Duluth and on the docks about the bay there is 180,000,000 feet. Cloquests yards contain 100,000,000 feet and the range mills have 20,000,000 feet on hand, a total of 300,000,000 feet that will be carried over and placed on the market next spring. Manufacturers are consoled, however, by the fact that every other lake port is sold closer to the saw than Duluth. The input of logs will be from 30 to 40 per cent less than last year. Shipments for September fell behiud the August figures. The shipments for the six months of the season to October 1, are as follows: Lumber, 181,414,000 feet; lath, 14,229,000; shingles, 58,890,000; total, reduced to board measure, 199,056,450 feet.

Port Collector Shields of Superior, reports as follows: 440 arrivals and clearances against 375 in September, 1894; coal receipts, 208,549 tons, as compared with 235,599 a year ago; wheat shipments, 3,521,755, bushels, against 1,510,716 last year; flour shipments, 452,887 barrels against 432,065 a year ago.

Duluth shipments were 2,228,370 bushels of wheat, 145,000 bushels of flax, and 213,099 tons of ore. Two Harbors shipped 279,124 tons. Last month the aggregate shipments were 624,172 tons.

FLOTSAM AND JETSAM.

Milwaukee received 214,757 tons of coal last week.

The trolley system is soon to be given a practical test on the Erie canal.

Welland canal authorities have issued orders limiting the draft to 13 feet.

Capt. Palfrey, engineer corps, U. S. A., stationed at Milwaukee, who has been granted sick leave, will soon be placed on the retired list.

TORONTO SUBSCRIBER.—If you will send to THE RECORD your name and address, we can furnish you privately with the information you desire.

Capt. Adolph Freitsch, who sailed from Milwaukee to England in his little sloop Nina, writes that he is about to sail from Glasgow to Jacksonville, Fla.

The Mabel Wilson discharged 2,186 tons of coal at the Milwaukee Gas Co.'s dock in 18 hours, with only three hoisting derricks, last Friday and Saturday.

The Port Huron & Sarnia Ferry Co. have compromised the custom house troubles by agreeing to make out a manifest for each boat at the close of each day.

Henry M. Morran, of Port Huron, has been awarded the contract to raise the Mark Hopkins for $13,000 or the wreck at underwriter's option. If he does not raise her he gets nothing.

Fire on Monday destroyed nearly 3,000,000 feet of the Murphy Lumber Co.'s stock at Green Bay, valued at $20 per thousand. The mill, worth $75,000, burned September 20, and it was decided not to rebuild.

The State of Michigan has begun suit against people owning club houses and summer residences on St. Clair Flats, claiming ownership of Hawser's and Stromer's Islands, and other portions of the flats, by virtue of a deed from the United States Government, given 30 years ago.

Hon. Wm. Smith, Deputy Minister of Marine and Fisheries, for the Dominion, suggests that any lake master running foul of the sunken wreck or shoal SE by S 5¼ miles from Point au Pelee light, he will be rendering the department great assistance if he will drop a buoy on the spot.

The United States Circuit Court of Appeals, at Cincinnati, has affirmed the decision of the Cleveland court whereby Henry J. Johnson, owner of the steamer V. Swain, was awarded a judgment of $10,000 and interest against the Insurance Company of North America of Philadelphia. The Swain lies in the old river bed at Cleveland, half full of water.

MARQUETTE CREW'S GOOD WORK.

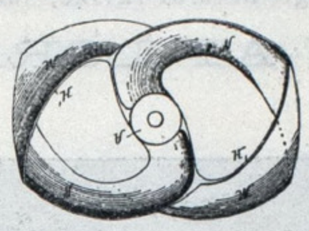
To the Editor of The Marine Record:

The RECORD of the 3rd inst., states that a crew of volunteers manned ansther life boat and brought ashore the remaining four men on the wrecked steamer Kershaw. One of my men was d sabled the fir.t trip of surf boat. Second trip, after capsizing, and being pounded by breakers and wreckage for three-fourths of an hour, three more men were disabled. Therefore, wi h my four r.maining surfmen and myself, and four volunteers we brought ashore the remaining four men on wreck.

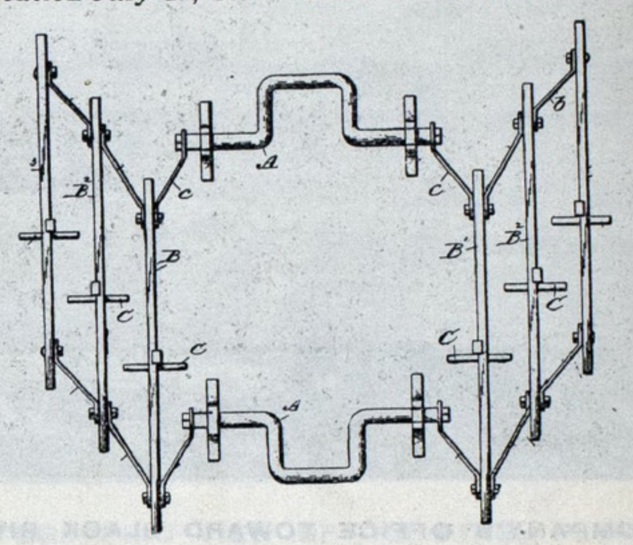
Marquette, Oct. 8, 1895. H. CLEARY, Keeper.

NEW PATENTS.

Mr. Herman Haussmann, of Chicago, has just obtained letters patent (No. 547,210) on a marine propeller, for which he applied Sept. 27. The blades are in the form of involute spirals arranged at angles to the axis of the propeller shaft, half of the blades being at angles reverse of the other half, all the blades, however, being straight in cross section, the outer ends intersecting and uniting. The axis of the involute spirals are parallel with, but eccentric to the axis of the propeller shaft. All of the propeller blades decrease in inclination or angularity, with relation to their respective axes, from their points of intersection to their butts.

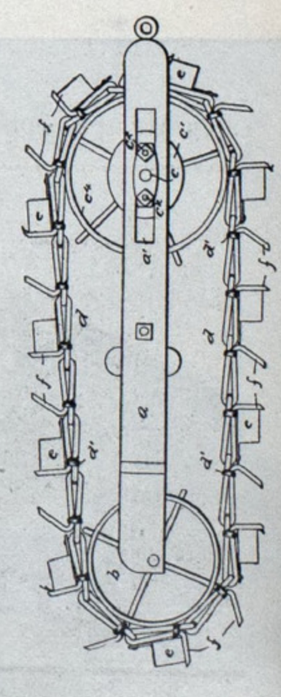


Christian Lang, of Cincinnati, and Gustav Belz, of Hamilton, O., have secured a patent (No. 547,137) on a propelling mechanism for boats, for which they filed application July 17, 1893. Their claim consists of the



combination with a driving shaft A, of the horizontal paddle beams, B^1, B^2, B^3, provided with paddle blades C, the bent connecting arms *a*, *b*, *c*, secured to the paddle beams by means of the bolts *d*, provided with a cylindrical portion passing through the said beams and rectangular portions passing through the said connecting levers, and the nuts d^1, on each end of the said bolts *d*, thereby rigidly connecting the said bent arms to form a crank shaft, substantially as described, and for the purpose stated.

Two other lake-region inventors are William F. Rhodes and Caspar Crouse, of Grand Junction, Mich., who have patented an excavator (No. 547,030), for which they applied March 19, 1895. It is an endless carrier comprising loosely connected links, each link formed with outwardly digging ends and every alternate link provided with buckets. Each link is formed in U-shape, with its ends doubled back to loosely embrace the cross bar of the preceeding link, and with the extremity turned outwardly to form the digging fingers and buckets. Each bucket is secured to its link with its rear, and resting against the digging fingers of its link, each projecting outwardly beyond the same; also of a sprocket pulley having a rim and a hub, the spokes projected outwardly to form the sprockets.



Other patents granted, which interest the marine circles, are as follows:

546,914. Port-Hole Stopper. James Casey, London, Eng. Filed April 17, 1895. Patented in England Feb. 5, 1895.

547,337. Ship's Ladder. Maurice Deane, San Francisco, Cal. Filed April 4, 1895.

547,024. Shore or Bank Protector and Apparatus for Constructing and Placing Same. David Neale, Port Calhoun, Neb. Filed Feb. 7, 1895. (No model.)

A full description of these patents can be obtained by sending to the Patent Office, Washington, 14 cents for each, and mentioning THE MARINE RECORD.

THE RECORD is indebted to the Lorain Herald for the original cuts from which the portraits on Page 3 were made. The Herald is engaged on a fine industrial edition, which will appear soon.

THE QUARTER'S TONNAGE.

Following is a statement of the sailing and steam vessels built in the United States and officially numbered, as shown by the records of the Bureau of Navigation, Treasury Department, during the quarter ended Sept. 31, 1895:

	No.	Gross Tons	PREVIOUS QUAR. No.	PREVIOUS QUAR. Gross Tons
Total Sail	108	20,166.78	126	33,507.69
Total Steam	92	38,888.11	121	39,124.95
Grand total	200	59,054.89	247	72,632.64

DISTRICT.	WOOD. SAIL. No.	WOOD. SAIL. Gross.	WOOD. STEAM. No.	WOOD. STEAM. Gross.	IRON. STEAM. No.	IRON. STEAM. Gross.	STEEL. SAIL. No.	STEEL. SAIL. Gross.	STEEL. STEAM. No.	STEEL. STEAM. Gross.
Atlantic and Gulf	88	12,321.38	27	2,263.26	2	326.29	..	.....	4	12,174.61
Pacific	12	2,468.45	5	461.13	..	.....	..	.....	..	.....
Great Lakes	5	125.00	23	5,829.53	..	.....	2	5,230.98	6	14,816.92
Western Rivers	1	20.97	25	3,016.37	..	.....	..	.....	..	.....
Total	106	14,935.80	80	11,570.29	2	326.29	2	5,230.98	10	26,991.53

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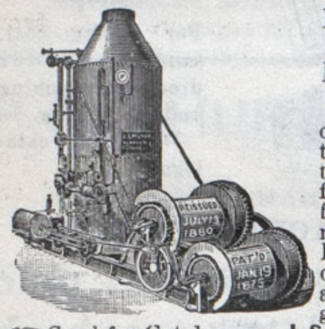

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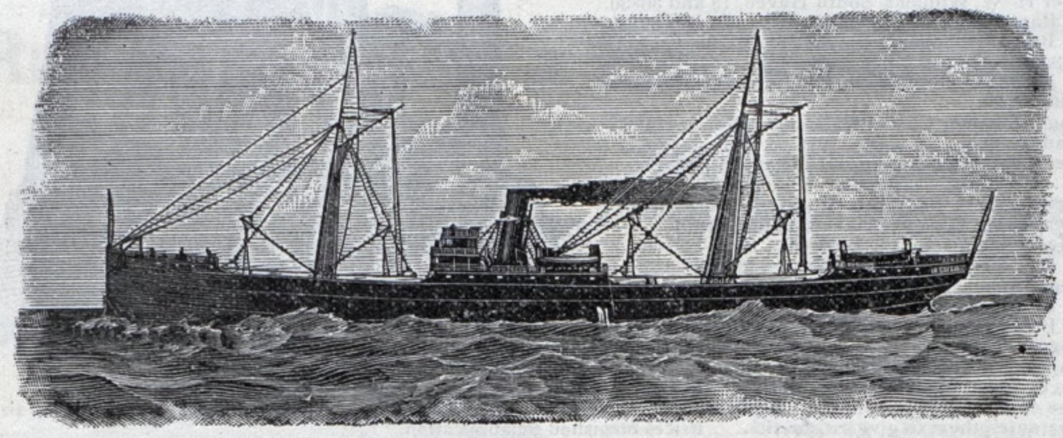

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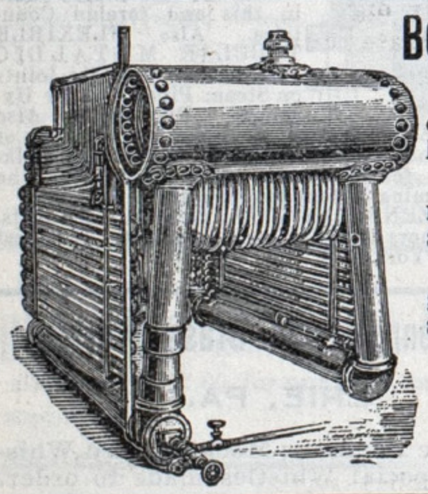

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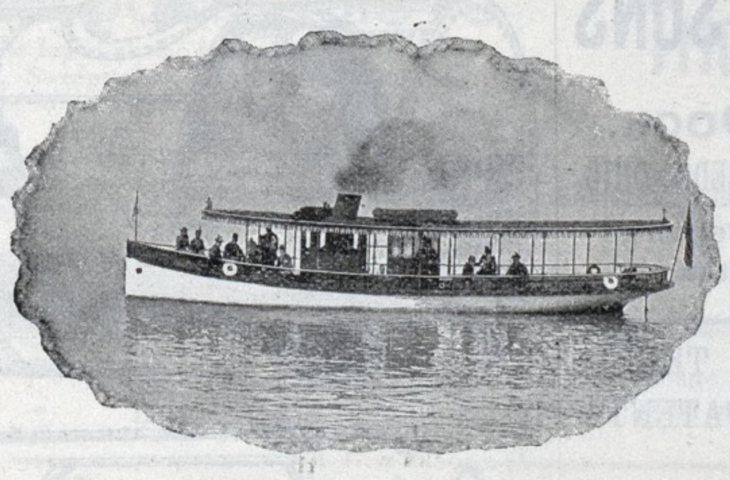

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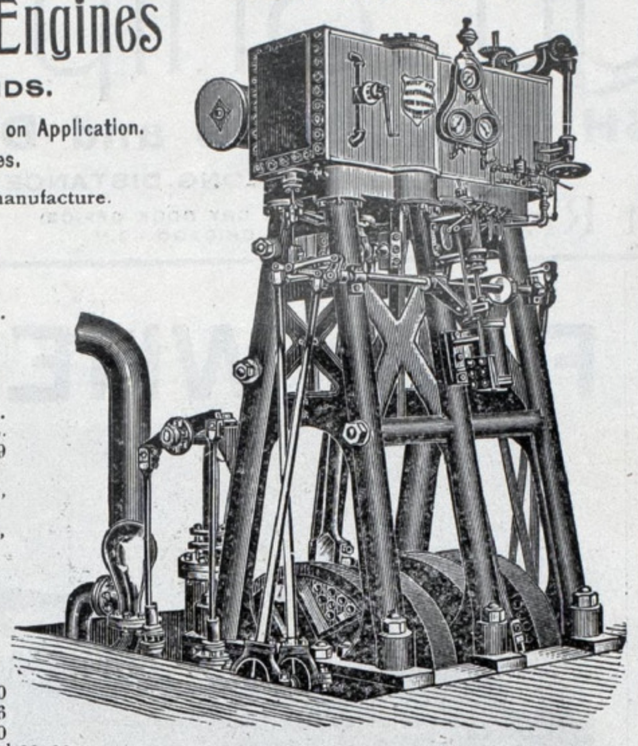

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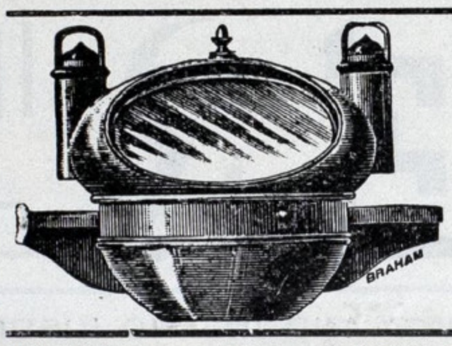

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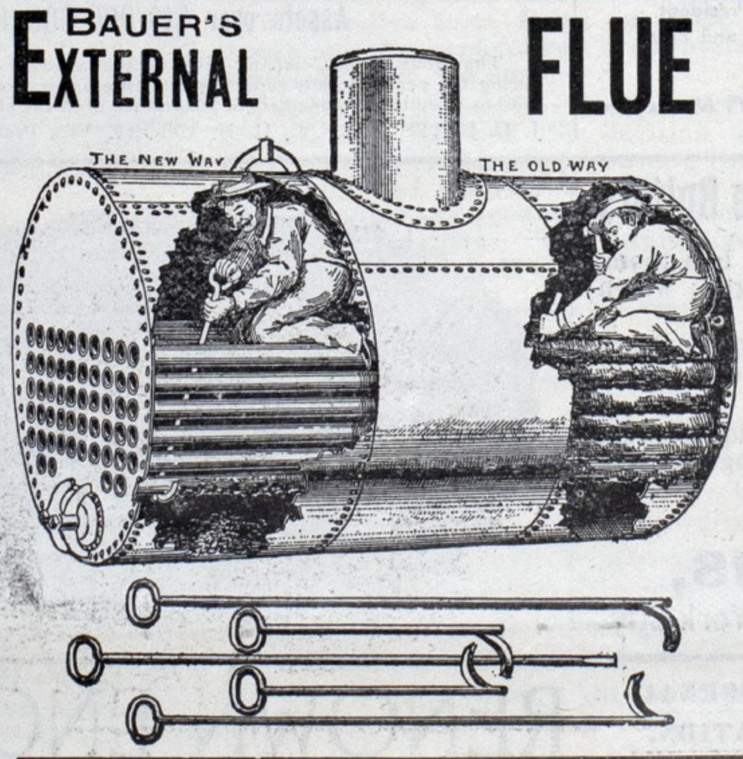

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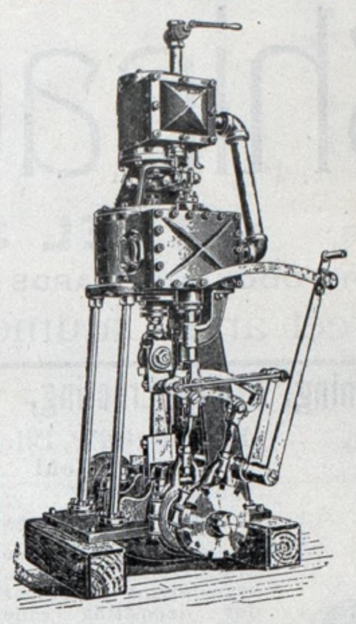

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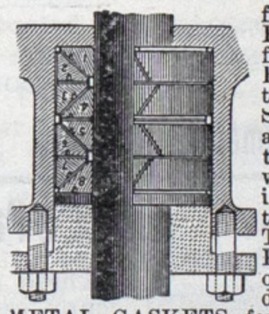

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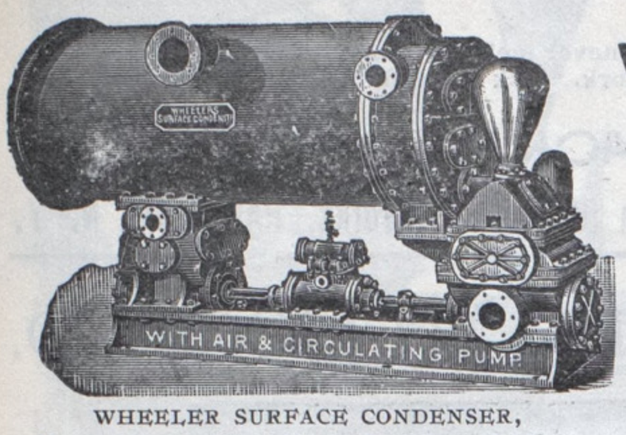

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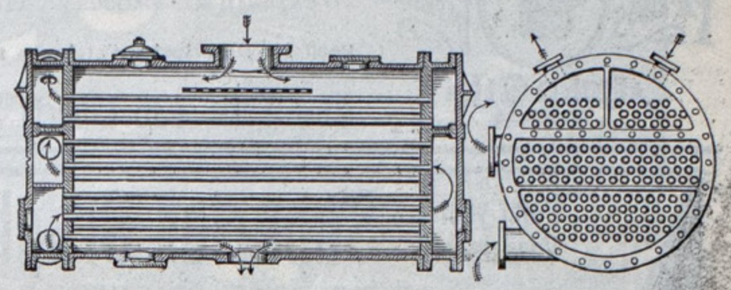

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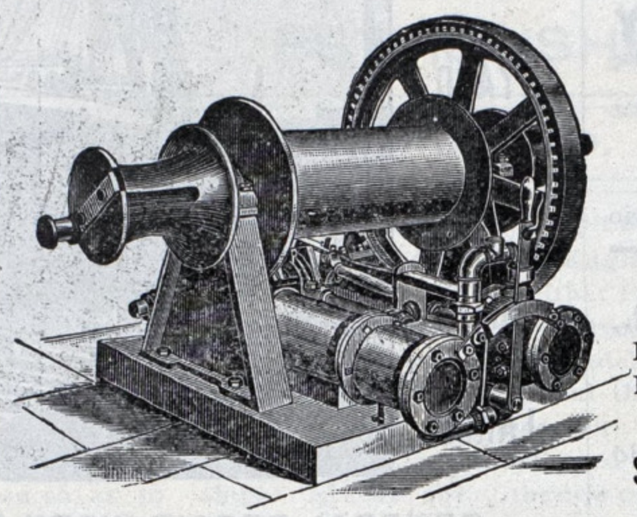

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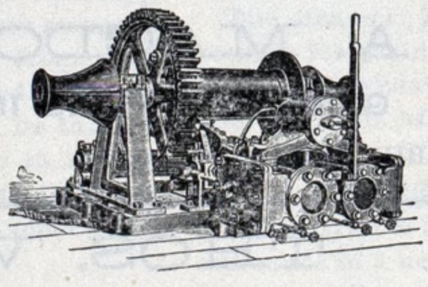

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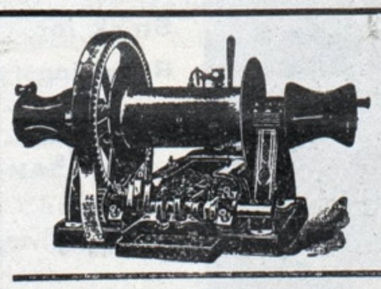

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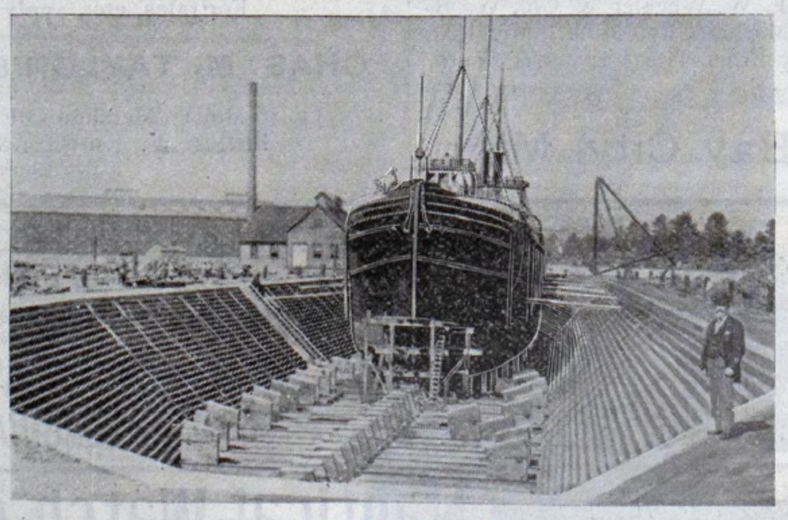

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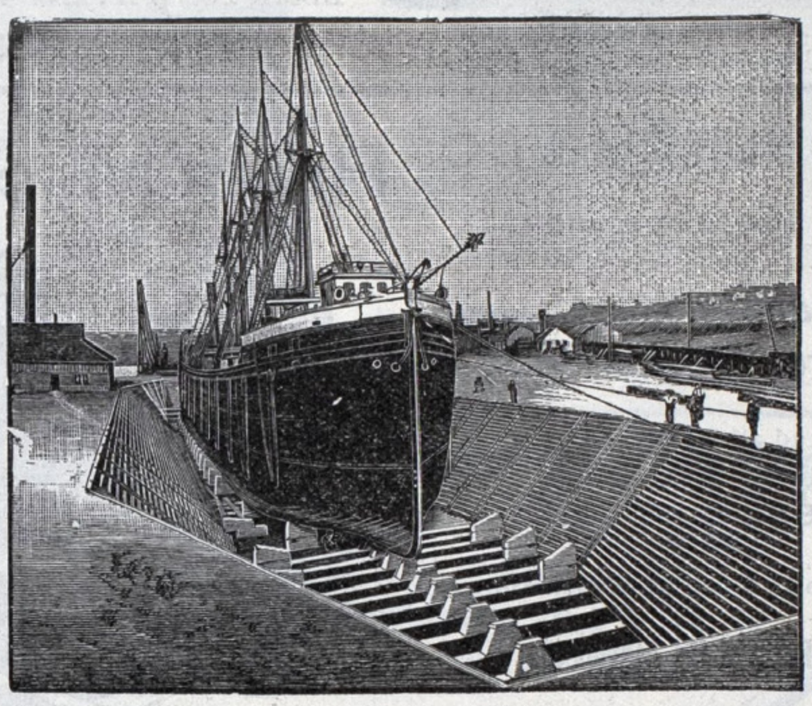

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